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Fish & Wildlife Division

RESOURCE DATA AND SPECIES AT RISK SECTION

MULTISAR

A Multi-Species Conservation Strategy For Species at Risk

2006-2007 Report

Alberta Species at Risk Report No. 114

Alberta
SUSTAINABLE RESOURCE DEVELOPMENT

A Multi-Species Conservation Strategy For Species at Risk

2006-2007 Report

Brad A. Downey, Richard W. Quinlan, Paul F. Jones, and Richard Ehlert

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MULTISAR is a collaborative effort of three agencies, cooperating landholders, and many other participants. It is succeeding because of the co-operative teamwork of all partners. This demonstrates a special open - minded attitude that goes beyond commitment and pride in any one organization, and is indicative of a desire in our society for multi-species and landscape-level conservation.

EXECUTIVE SUMMARY

The MULTISAR Conservation Program is managed by Sustainable Resource Development- Fish and Wildlife (SRD-F&W), Alberta Conservation Association (ACA), and Sustainable Resource Development- Lands (SRD-Lands). The concept behind the program was envisioned by Alberta's Habitat Stewardship Committee and designed by SRD-F&W and ACA biologists. The creation of a Management Advisory Committee (MAC) in 2006 will allow for input and guidance into the program by key partners involved in MULTISAR. The MULTISAR Program was initiated in the Milk River Basin in 2002 to assist landholders in the management of species at risk on their land. After its inception in 2002, MULTISAR expanded in 2005 to include the Pakowki Basin and portions of the St. Mary's Basin into its core program area in response to landowner interest. Conservation programs are now initiated on roughly 180,000 acres of lands and public interest continues to grow within and outside the program area. With the increase in public interest outside MULTISAR's program area an extension program will be developed in 2007 entitled "*At Home on the Range*" that will be a condensed version of the MULTISAR Program. This will allow landholders throughout the grasslands with access to MULTISAR biologists to consult with about wildlife habitat. The "*At Home on the Range- Living with Alberta's Species at Risk*" guide was developed in collaboration with several organizations dedicated to the conservation of Alberta's grasslands. This guide will be distributed across the grassland natural region to landholders through the MULTISAR extension program.

The program remains committed to its five key elements identified in 2006: 1) Education and Awareness, 2) Inventory and Monitoring, 3) Habitat Conservation 4) Implementation and Action, and 5) Evaluation. This report contains updates on each of the programs five key elements.

1.0 INTRODUCTION

MULTISAR provides a process for appropriate management of multiple species at the landscape level. The first two years (2002-2003, 2003-2004) of the program concentrated on the development of the MULTISAR process through baseline wildlife inventories (Quinlan *et al.* 2003, Quinlan *et al.* 2004), construction of Habitat Suitability Index (HSI) models (Downey *et al.* 2004), prioritization of the landscape for conservation activities (Multi-species Conservation Value (MCV)), and developing Beneficial Management Practices (Jones and Downey 2004, Rangeland Conservation Services Ltd. 2004). During the past three years the focus of the program has shifted to the development and implementation of individual conservation programs. These conservation programs are termed Habitat Conservation Strategies (HCS) and are currently being implemented and completed on roughly 180,000 acres of native prairie in the Milk River, Pakowki, and St. Mary's Basins.

The MULTISAR conservation program is a cooperative initiative between landholders, Sustainable Resource Development- Fish and Wildlife (SRD-F&W), Alberta Conservation Association (ACA), and Sustainable Resource Development- Lands (SRD-Lands). This interdepartmental and interagency cooperation is key to the implementation of MULTISAR, and will facilitate conservation of multiple species across the landscape. The participation of SRD-Lands allows for the implementation of the MULTISAR habitat conservation strategies on leased land. MULTISAR is also a team member of the Milk River Watershed Council Canada and continues to collaborate with local counties and the Watershed Council on grazing schools and demonstration projects.

MULTISAR's broader focus on education and awareness has led to partnerships with several conservation organizations on the development of the "*At Home on the Range*" guide (Saunders *et al.* 2006). This guide will serve as an important tool for species at risk stewardship and will be a key part of MULTISAR's "*At Home on the Range*" extension program in 2007-2008 that will be delivered throughout Alberta's Grassland Natural Region.

2.0 MULTISAR PROGRAM AREA

In 2005 the MULTISAR program area expanded to include the Pakowki Basin and portions of the St Mary's Basin (Figure 1). This expansion was in response to additional recovery plan actions being taken on by MULTISAR for species at risk such as Western Blue Flag *(Iris missouriensis)* and Western spiderwort (*Tradescantia occidentalis*). The current program area is approximately 13,457 km^2 in size and the boundaries extend north from the United States border along the Saskatchewan border to Cypress Hills Provincial Park and west from the Saskatchewan border to Police Outpost Lake just west of Highway 2.

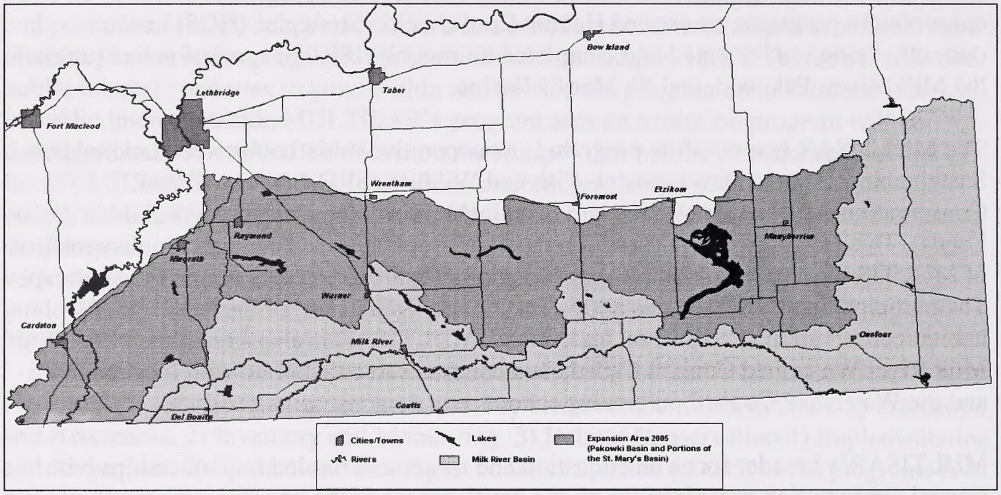

Figure 1: MULTISAR Program Area

2.1 Milk River Basin

The Milk River Basin is unique to Alberta, in that it is part of the Mississippi Watershed flowing into the Gulf of Mexico. Within Alberta, it is made up of the North Milk and Milk Rivers. The two forks join approximately 20 km west of the town of Milk River. Within Alberta the North Milk River is approximately 90 km in length, while the Milk River is approximately 271 km long (Clayton and Ash 1980). Some of the main tributaries to the Milk River include: Red Creek, Lodge Creek, Sage Creek, Shanks Creek, MacDonald Creek, Deer Creek, Bear Creek, Police Creek, Lonely Valley Creek, and Lost River.

2.2 Pakowki Basin

The Pakowki Basin is considered a sub basin of the South Saskatchewan Basin, however during most years the water in the Pakowki Basin is isolated from the Saskatchewan. The Pakowki Basin contains Pakowki Lake, which is a large and shallow lake important for many migrating and nesting waterfowl. Other lakes in the basin include Tyrell, Verdigris, Crow Indian, Jensen Reservoir, and Milk River Ridge Reservoir.

2.3 St. Mary's Basin

The portion of the St. Mary's Basin included in MULTISAR extends from Police Outpost Provincial Park, north to Highway 5. This area contains steep cliffs, rock ledges and rolling grassland. The majority of the western blue flag population, a "threatened" species of plant in Canada, occurs in this area (Alberta Sustainable Resource Development and Alberta Conservation Association 2005).

2.4 Topography

Badlands, plains, uplands, rock cliffs, sand dunes, and valleys are all components of the program area. Badlands occur primarily in the downstream section near Lost River and are characterized by steep slopes and heavily eroded areas. Gently undulating plains primarily occur in the northwest corner of the area south of Cypress Hills Provincial Park and in the west central portion of the drainage surrounding the town of Milk River. Uplands habitat, characterized by rolling hills, occurs in the south central portion of the drainage as an effect of the Sweet Grass Buttes in Montana and in the northwest corner along the Milk River Ridge. Rock cliffs for nesting raptors are found along the upper Milk River, North Milk River, and St. Mary's River. Sand dune complexes can be found around Pakowki Lake. Large valleys can be found in the Pakowki Basin and the Milk River Basin and its tributaries. Many areas along the Milk River valley in and near Writing On Stone Provincial Park contain eroded sandstone cliffs and hoodoos.

2.5 Vegetation

The MULTISAR program area is located within the Grassland Natural Region and contains areas of the Dry Mixed Grass, Mixed Grass, and Foothills Fescue subregions (Achuff 1994). The dry mixed grass subregion encompasses the largest area within the drainage and is represented by both short grass, such as blue grama *(Bouteloua gracilis),* and mid-grasses like western wheat grass *(Agropyron smithii)*, June grass *(Koeleria macrantha)*, and spear grass *(Stipa spp.)*. The mixed grass subregion is found in the northeast corner of the area near the Cypress Hills, in the south central area north of the Sweet Grass Buttes, and east of the Town of Milk River to where the North Milk River flows in from the United States and North to Raymond. It contains similar vegetation as the dry mixed grass subregion however, more western porcupine grass *(Stipa curtiseta)* and northern wheat grass *(Agropyron dasystachyum)* are found resulting from the slightly moister and cooler climate. The foothills fescue subregion is found in the western part of the program area and is dominated by grasses such as rough fescue *(Festuca scabrella),* Idaho fescue *(Festuca idahoensis),* Parry's oatgrass *(Danthonia parryi)* and intermediate oatgrass *(Danthonia intermedia)*. Differences in vegetative communities are representative of differences in soils and climate (Achuff 1994).

Most of the shrubs and trees found in the program area are natural communities of thorny buffaloberry *(Shepherdia argentea)*, willow *(Salix spp.),* and cottonwoods *(Populus spp.)* scattered along the riparian zones and valley draws in the program area. Silver sagebrush (*Artemesia cana*) is also prevalent throughout the area and particularly extensive in the southeast corner of the Milk River Basin. Other shrub species found in the area include rose *(Rosa spp.),* buckbrush *(Symphoricarpos occidentalis),* saskatoon *(Amelanchier*

alnifolia), chokecherry *(Prunus virginiana), silverberry (Elaeagnus commutata),* and skunkbrush *(Rhus trilobata).*

Numerous forb species are present throughout the program area, three of which are of particular interest, western blue flag, western spiderwort, and soapweed (*Yucca glauca*). The Canadian populations of western blue flag and soapweed are restricted to the MULTISAR program area in southern Alberta.

Introduced species, such as common caragana *(Caragana arborescens),* Manitoba maple (*Acer negundo*), Russian olive *(Elaeagnus angustifolia),* and Siberian elm *(Ulmus rubra)* are found primarily in shelterbelts and hedgerow plantings within fields or around active or abandoned farmyards. Russian olive is becoming a concern in areas where it is found in riparian zones. Other weedy species such as spotted knapweed (*Centaurea maculosa*) and yellow toadflax (*Linaria vulgaris*) are beginning to appear in the western portion of the program area (M. Uchikura, pers. comm).

2.6 Land Use

The program area includes the towns and villages of Cardston, Magrath, Raymond, Milk River, Foremost, Warner, Coutts, Etzikom, Manyberries, Wrentham, Orion, Spring Coulee and Del Bonita. The primary land use in the MULTISAR program area is cattle grazing. Three large provincial grazing reserves (Pinhorn, Sage Creek, and Twin River), an Agriculture and Agri-food Canada research substation (Onefour), several community pastures, and numerous grazing leases conserve the majority of the natural grasslands. Only around 34% of the program area is cultivated mostly near the towns of Milk River, Raymond, and Foremost. Oil and gas activity is present throughout the area and the level of oil and gas activity is increasing. Several important ecological areas also occur within the program area including: Writing-on-Stone Provincial Park, portions of Cypress Hills Provincial Park, the Milk River Natural Area, Woolford Provincial park, Pakowki Lake Bird Sanctuary, Police Outpost Lake, Ross Lake Natural Area and Kennedy Coulee Ecological Reserve.

3.0 MULTISAR CONSERVATION PROGRAM

MULTISAR strives to promote wildlife values in landholders by providing information and tools to assist recovery efforts for species at risk and the conservation of native prairie habitat. The process is flexible and dynamic; its success lies in the creation of partnerships with landholders, SRD-Lands, SRD-F&W, conservation groups, and rural communities. The success of MULTISAR can also be attributed to the multi-species approach, voluntary collaboration, and acknowledgement that many of these species still exist due to the conservation practices of landholders. Without conservation-minded landholders, large tracts of native prairie and the habitat they entail would no longer support many of Alberta's species at risk. Maintaining the ecological integrity and viability of the land is key for not only the landholders' livelihood, but also the wildlife habitat they manage. With this philosophy, a growing number of landholders have become involved with the MULTISAR Program. The program's vision is "that multiple species of wildlife including species at risk, are effectively conserved at the landscape level, through a process that integrates range management with fish and wildlife management principles and in a manner that contributes to the sustainability of the rural economy" (Downey *et al.* 2006). In order to continue this tradition throughout Alberta's grasslands MULTISAR, along with collaborating partners, developed a landholder friendly guide entitled "*At Home on the Range*" which will be distributed to landholders across Alberta in 2007-2008. This guide will be a key part of the MULTISAR extension program which will provide landholders outside the current project area with species at risk habitat information and consultation opportunities with MULTISAR staff.

The MULTISAR conservation program and includes five elements: 1) awareness and education, 2) inventory and monitoring, 3) habitat conservation, 4) implementation and action, and 5) evaluation.

3.1 Awareness and Education

MULTISAR continues to increase awareness and promote education on species at risk and their habitats throughout the grasslands of Alberta. An important tool for MULTISAR's awareness and education campaign is the "*At Home on the Range – Living with Alberta's Prairie Species at Risk*" guide (Saunders *et al.* 2006). Several organizations dedicated to conservation of Alberta's grasslands helped develop this guide. "*At Home on the Range*" is a landholder friendly guide that discusses several ways in which landholders can enhance and maintain native habitat on their land, species habitat requirements, and which species are at risk. The guide also looks at current legislation for species at risk, the implications, addresses concerns surrounding species at risk, highlights the benefits of having species at risk, and contains a list of organizations actively promoting stewardship activities within the grasslands. The "At *Home on the Range*" guide also contains a mini guide within entitled "*Over and Under the Range*" which describes the importance of maintaining the ecological integrity of the range to not only benefit wildlife, but also soil stabilization, weed control, water filtration, and nutrient buildup. In 2001, an Education Coordinator will be brought into the MULTISAR team to develop Beneficial Management Practices (BMP) fact sheets and deliver educational presentations and materials to rural communities and schools.

MULTISAR participants conducted several presentations throughout Alberta and Canada in 2006-2007. Individuals at the "Valuing Nature" Stewardship Conference in Corner Brook, Newfoundland, and the Prairie Conservation and Endangered Species Conference in Regina, Saskatchewan, as well as several local groups within Alberta received presentations (Table 1 and 2). MULTISAR participated in the Milk River Watershed Stockman's Grazing School and presented in collaboration with Operation Grassland Community on species at risk and their habitats. As part of the Stockmen's school MULTISAR escorted 20 participants onto MULTISAR participating lands to discuss how wildlife habitat enhancements could benefit wildlife, cattle, and the landholder.

Educating youths is another important component to MULTISAR's awareness and education program. Twenty students from Earl Rivers High school in Milk River and Coutts High School where escorted on a northern leopard frog survey. Proper handling techniques, identification, and habitat requirements were discussed and prizes were awarded for correct answers to questions posed at the end of the survey. One student from Calvin Christian School also spent one week as part of his school's work experience program with MULTISAR biologists completing sharp-tailed grouse lek and Richardson's ground squirrel surveys.

Table 1. MULTISAR communication with landholders and community groups (2002-2007).

Communication	Number of individuals
In-person meeting	81
Phone call	100
MULTISAR Stewardship Brochure	700 Distributed
At Home on The Range Guide	3000 Distributed
Presentations	31
School groups	3

Table 2. MULTISAR presentations (2003-2007)

Audience/Recipient	Presentation Date	Number in Attendance
Government of Canada Habitat Stewardship Program	3-Mar-03	12
Alberta Fish and Wildlife General Meeting	9-Oct-03	50
OGC Meetings - Milk River and Vauxhall	3&4-Dec-03	25
Southeast Region SRD Executive Caucus	16-Jan-04	15
Alberta Fish and Wildlife staff (Medicine Hat)	20-Jan-04	12
The Grassland Conservation Working Group	23-Jan-04	10
Calgary Zoo Endangered Species Team	28-Jan-04	25
The 7th Prairie Conservation and Endangered Species Conference	27-Feb-04	250
Sustainable Resource Development- Public Lands and Forestry Division	8-Mar-04	30
Milk River Fish Recovery team and Municipalities	25-Mar-04	20
Alberta SRD Legal Services Division	1-Apr-04	3
Southeast SRD Region General Meeting	7-Apr-04	50
Sustainable Resource Development (SRD) Executive Committee	28-Sep-04	25
Minister Of Alberta Sustainable Resource Development	21-Jan-06	10
Alberta Beef Producers	2-Feb-06	12
Society for Range Management World Conference	14-Feb-06	60
Endangered Species Conservation Committee	3-Mar-06	40
ACA Southern Business Unit Annual Meeting	Jun-06	15
Milk River Watershed- Stockman's Grazing School – Presentation	21-Jun-06	25
Milk River Watershed- Stockman's Grazing School – Field Tour	22-Jun-06	20
Prairie Conservation Forum	23-Jun-06	15
Valuing Nature – National Stewardship Conference, NFLD	8-Jul-06	100
Alberta Soils Tour	24/25-Jul-06	80
USDA Forest Service - Alberta Grasslands Tour	13-Sep-06	25
University of Lethbridge - Prairie Conservation Course	7-Nov-06	20
University of Lethbridge – Range Health and Issues	28-Nov-06	10
Western Grazing Conference	8-Dec-06	175
Milk River Watershed Council Canada- SOW Meeting	22-Feb-07	40
The 8th Prairie Conservation and Endangered Species Conference	2-Mar-07	150
Alberta Chapter of the Wildlife Society	19-Mar-07	150
SRD, Science Committee and Deputy Minister	20-Mar-07	12

3.2 Inventory and Monitoring

3.2.1 Inventories on Wildlife

Acquiring information is crucial to the development of MULTISAR Habitat Conservation Strategies. MULTISAR has completed baseline wildlife inventories on over 100,000 acres of native prairie and has an additional 60,000 acres to survey in 2007-2008. There were 5,561 observations from the MULTISAR program entered into the Fish and Wildlife Management Information System (FWMIS) for 2006. Survey methods employed on MULTISAR participating lands are outlined below.

3.2.1.1 Multi-Species Surveys
Multi-species surveys (grassland birds, mammals, raptors, etc) involve 2 to 4 surveyors walking designated transects within specified fields. Transects varied in length depending on the field and were spaced 400m apart with stops made every 400m along transects. Transects were completed in the early morning between 5:00 am – 11:00 am when the wind is less then 30 km/hr and there is no rain or snow. At every stop, a 5 minute wildlife survey was completed in which birds, mammals, and herptiles seen or heard within 200m were recorded. Any pertinent habitat information such as burrows, trees, nests, leks, ephemeral ponds or shrub complexes were also noted. GPS locations were taken at each stop so that information collected could be downloaded into the Fish and Wildlife Management Information System (FWMIS) and to facilitate ongoing monitoring in future years. In between stops, important habitat information and wildlife sightings not seen at the previous stop were also recorded.

3.2.1.2 Bird Surveys
Grassland bird surveys were conducted along roads within and bordering MULTISAR cooperator's land. These surveys follow the long-billed curlew (*Numenius americanus*) survey protocol outlined by Saunders (2001). Grassland bird species of interest include long-billed curlew, Sprague's pipit (*Anthus spragueii*), Baird's sparrow (*Ammodramus bairdii*), and upland sandpiper (*Bartramia longicauda*).

Sharp-tailed grouse (*Tympanuchus phasianellus*) lek surveys were completed throughout cooperating ranches in early May. Surveys followed the protocol outlined by Alberta Fish and Wildlife (Alberta Sustainable Resource Development 2005).

In areas with high potential for burrowing owls (*Athene cunicularia*) an electronic call playback survey was conducted following Alberta Fish and Wildlife protocols (Alberta Sustainable Resource Development 2005). Electronic calls for loggerhead shrikes (*Lanius ludovicianus*) following survey methodology outline by Prescott (2003) were also conducted where suitable habitat occurs (shrubs).

3.2.1.3 Mammal Surveys
Richardson's ground squirrel (*Spermophilus richardsonii*) surveys were conducted during the multi-species surveys wherever burrow complexes exist and along road transects every 800m following the protocol outlined in Downey 2003. This involves the use of electronic Richardson's ground squirrel alarm calls to elicit a response and increase visibility. Total counts were conducted within a 200m radius at each stop along the multi-species and road transects.

3.2.1.4 Amphibian Surveys
Northern leopard frog (*Rana pipiens*) and tiger salamander (*Ambystoma tigrinum*) surveys involve 1 to 2 individuals walking around the edge of ephemeral or permanent wetlands in early spring searching for egg masses and in late summer searching for adults and young of the year (Kendall 2001). Dip nets are also used in ephemeral wetlands to determine if plains spadefoot (*Spea bombifrons*) or great plains toad (*Bufo cognatus*) tadpoles were present. Surveys for calling plains spadefoot and great plains toads were

conducted along roadways as outlined in Alberta Sustainable Resource Development (2005). If amphibians were found then GPS locations and habitat information were recorded (Taylor and Downey 2002).

3.2.1.5 Reptile Surveys

In the late summer and early fall, surveyors searched potential habitat for snake hibernacula. Surveyors looked for burrows along south facing coulees and valley slopes. GPS location and detailed habitat information was recorded and a follow up spring survey of the hibernacula or potential hibernacula was scheduled (Downey and Taylor 2002).

3.2.2 Range Inventories

Detailed range assessments and permanent transects were established for participating lands. These inventories provide information on the current state of the range and identify important areas where enhancements are needed. The range inventories involve a 50m transect with 10 Daubenmire plot frames located at 5 m intervals along which vegetation, species cover, soil exposure, moss/lichen cover and total vegetation cover are recorded.. Data is recorded on field sheets provided by Alberta Sustainable Resource Development (Willoughby *et al.* 2005). The information is then compiled using ArcView GIS to develop a range health map of the participating ranch with wildlife sightings used as an overlay to visually identify range health with wildlife habitat correlations. MULTISAR will be looking at partnering with a university in 2007/2008 to increased research into range health and wildlife habitat correlations.

3.2.3 Monitoring

Monitoring habitat changes to evaluate their influence on species at risk habitat and populations is a crucial step in understanding the benefits of implementing beneficial management practices on the landscape. MULTISAR has ongoing annual and bi-annual monitoring of key features on the landscape (burrowing owl burrows, hibernacula, ferruginous hawk nests, sharp-tailed grouse leks) and a commitment to re-evaluate MULTISAR participating lands five years from the initial inventories. Monitoring allows adaptive management to ensure Habitat Conservation Strategies remain effective.

3.2.4 MULTISAR Project-Wide Wildlife Surveys

Wildlife surveys by MULTISAR stretching across the Milk River Basin have been done since 2002 to monitor trends in populations outside participating ranches. These surveys also assist in verifying Habitat Suitability Index (HSI) models created for the area, help determine species status, and populate the Fish and Wildlife Management Information System (FWMIS), which is useful to Sustainable Resource Development with management in the basin. These surveys are completed either annually or biennially depending on workload. In 2006, wildlife inventories for ferruginous hawk, Richardson's ground squirrel, sharp-tailed grouse, and toads were completed.

3.2.4.1 Ferruginous Hawk

The importance of the Milk River Basin to the ferruginous hawk population became evident in the 2005 provincial inventory, which found 36% of the estimated 618 $\pm$ 162

pairs of ferruginous hawks nested in the Basin (Downey 2006). With a population estimate of only 618 ± 162 pairs, the ferruginous hawk status was subsequently raised from 'Threatened' to 'Endangered' in Alberta (Endangered Species Conservation Committee 2007). Ferruginous hawk blocks within the Milk River Basin were monitored annually between 2003-2005 and trends were promising as populations were apparently increasing within the basin (Figure 2). Increased emphasis on MULTISAR habitat conservation strategies limited the number of ferruginous hawk blocks surveyed within the basin in 2006. A more concerted effort between MULTISAR personnel and Fish and Wildlife staff will be applied in 2007 to ensure ferruginous hawk blocks used to develop trends within the basin are completed.

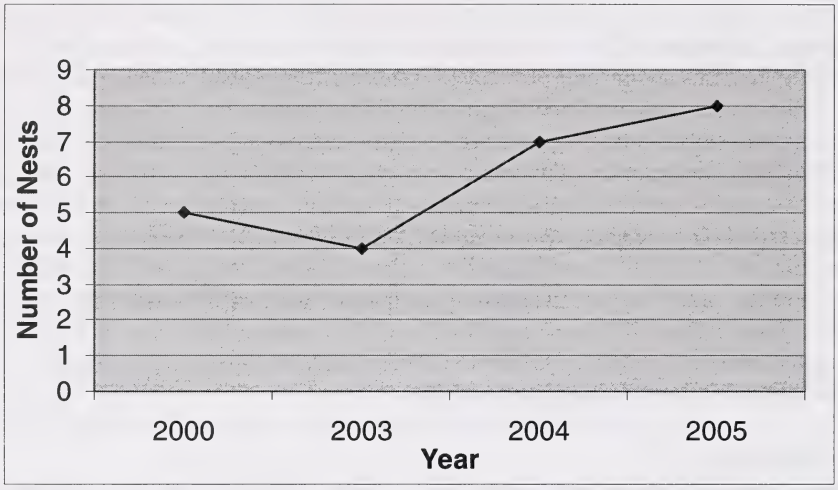

Figure 2. Number of ferruginous hawk nests found each year on MULTISAR trend blocks

3.2.4.2 Richardson's Ground Squirrel

Richardson's ground squirrels play an important role as prey for numerous predators such as ferruginous hawk, prairie falcon, burrowing owls, and others. Monitoring trends in ground squirrel populations has been a key component to the MULTISAR program since 2004 to better understand the impact of prey densities on predators. Ferruginous hawk blocks having Richardson's ground squirrel surveys completed consistently between 2004-2006 were used to show trend (Figure 3; Table 3). Statistical analysis of the trend and its comparison with ferruginous hawks will be completed in 2007.

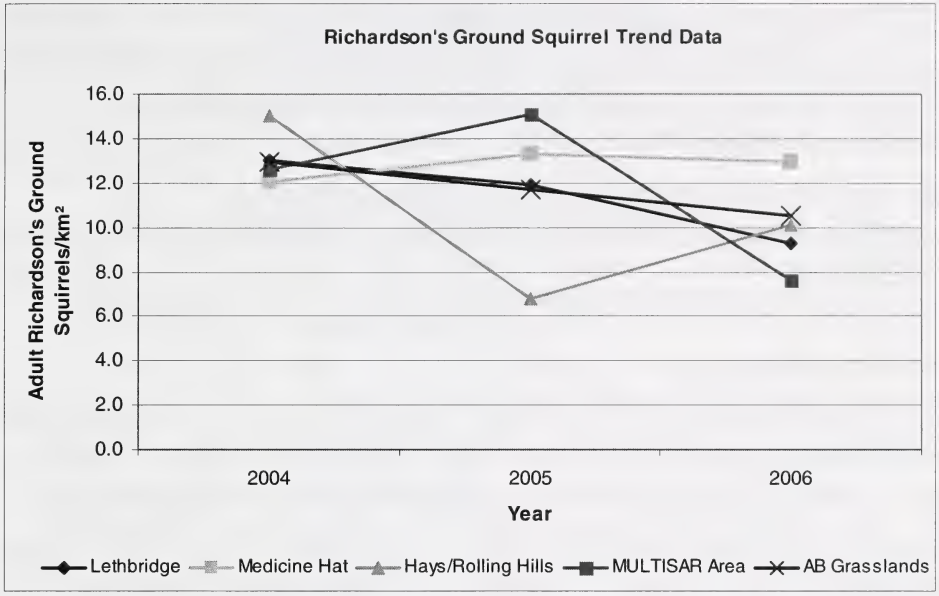

Figure 3. Trends in Richardson's ground squirrel populations within Alberta, Canada

Table 3. Richardson's ground squirrel population trends and the number of transects completed each year in Alberta, Canada

Area	Year	Number of transects/ blocks	RGSQ/km²
MULTISAR Area	2004	6	12.6
	2005	6	15.1
	2006	6	7.6
Lethbridge	2004	9	13.0
	2005	9	11.9
	2006	9	9.3
Medicine Hat	2004	5	12.1
	2005	5	13.3
	2006	5	12.9
Hays/Rolling Hills	2004	2	15.0
	2005	2	6.8
	2006	2	10.1
AB Grasslands	2004	16	12.9
	2005	16	11.7
	2006	16	10.5

Richardson's ground squirrels appear to be declining in the MULTISAR Area, Lethbridge Area, and the Alberta Grasslands in general over the last three years. Populations are remaining steady in the Medicine Hat Area and are rebounding in the Hays/ Rolling Hills Area from a sharp decline in 2005 (Figure 3). Continued declines in prey populations could imply decreased predators populations in those areas affected.

3.2.4.3 Sharp-tailed Grouse

Alberta Fish and Wildlife staff have completed sharp-tailed grouse surveys since the early 1980's throughout the MULTISAR project area. MULTISAR has assisted through

monitoring leks located on MULTISAR cooperating lands. Continued annual monitoring by Fish and Wildlife and MULTISAR will provide a comparison of sharp-tailed grouse numbers on MULTISAR lands versus the rest of the project area. These surveys will also contribute to evaluations of sharp-tailed grouse beneficial management practices implemented on ranches (Table 4).

Table 4. Sharp-tailed grouse leks surveyed within the Milk River Basin in 2006

2006	MULTISAR project area	MULTISAR co-operators land
Active Lek	32	9
Inactive Lek	11	1
Grouse/Lek	16.3	19.8

3.2.4.4 Toad Surveys

Surveys were completed for toads in June of 2006 when heavy rainfalls (~100mm) inundated the MULTISAR project area with water in the middle of June 2006 (The Weather Network 2007). Surveyors completed the 10 transects identified as RANA routes in Downey (2006) and one additional route in the Wrentham/Skiff area. Great plains toads were found along Route 6 in 2006 and continue to be present around the Wrentham/ Skiff area (Route 36) in predominately cultivated habitats. During survey in 1987-1990 no great plains toads were found to be using ponds in cultivated areas (Wershler and Smith 1992). Plains spadefoot were heard along four of the ten RANA routes and in the Wrentham/Skiff area. The total number of stops containing great plains toads, plains spadefoot, and boreal chorus frogs for each route are located in table 5. The data collected during amphibian surveys in 2007 was also supplied to the provincial RANA coordinator.

Table 5. Number of stops containing great plains toads, plains spadefoot, or boreal chorus frogs along RANA routes surveyed in 2006

Route #	Location	Number of stops containing species		
		Plains Spadefoot	Great Plains Toad	Boreal Chorus Frog
2	Onefour/Manyberries	0	0	16
6	Onefour	0	11	13
7	South of Cypress Hills	0	0	3
8	South of Cypress Hills	0	0	2
17	Milk River	2	0	15
18	Del Bonita	0	0	4
23	Pinhorn	0	0	16
26	Writing On Stone Provincial Park	10	0	18
27	Westside of Pakowki Lake	3	0	11
35	Fort Macleod	18	0	31
36*	Wrentham/Skiff	17	14	17

*Currently not identified as a RANA route

3.3 Habitat Conservation Strategy

The MULTISAR Letter of Intent contains a check list of MULTISAR components offered to landholders (Appendix A). Landholders check off the boxes that are applicable to them when they sign the Letter of Intent. These letters are then used to guide the content of the Habitat Conservation Strategy (HCS) and to aid with projecting future funding applications.

A HCS is a detailed assessment of wildlife and range health occurring on a ranch which contains recommendations and wildlife enhancements that can benefit species at risk. These strategies are an accumulation of local and technical knowledge compiled jointly by the MULTISAR team including the landholder. Three HCS have been completed under the MULTISAR program and an additional three strategies have interim reports completed as the wildlife and range assessments will continue into 2007-2008. One additional HCS will be initiated in 2007. All HCS's have a signed stewardship commitment letter that acknowledges the HCS and the participation of all groups involved to implement proposed enhancements (Appendix B). Evaluation of the effectiveness of HCS in enhancing wildlife habitat for species at risk will be conducted through annual and bi-annual monitoring of key wildlife sites (sharp-tailed grouse lek, sage grouse leks, etc.) and through the MULTISAR 5 year monitoring component of the HCS. Surveys completed across the Milk River Basin will also be compared with monitoring surveys on MULTISAR participating lands to ascertain whether beneficial management practices implemented on those lands are providing better management for species at risk versus the rest of the basin.

3.4 Implementation and Action

To date the program has provided proactive management for species at risk on over 66,082 acres, and provided practical management information to over 50% of the program area. MULTISAR also collaborated with the County of Warner and the Milk River Ranchers on a portable watering system that is used for demonstrations and is available to ranchers within the Milk River Basin. Several other actions have been identified for 2007 – 2008, including:

1) Restoration of abandoned cultivation back to native prairie
2) Restoration of tamed pasture back to native prairie
3) Two wetland enhancements
4) Installation of snake tunnels to reduce road mortalities
5) Uplands watering system to improve riparian health
6) Purchase of two portable watering systems
7) Incorporate a winter grazing regime on rough fescue grassland for grassland birds and sharp-tailed grouse on one participating ranch.

3.5 Evaluation

MULTISAR has recorded an increase in participation of landholders in the conservation program from 1 in 2004 to 7 in 2006 (Table 6). The number of acres associated with the program has also increased three fold (Table 6).

Table 6. Participation in the MULTISAR Program

	2004	2005	2006
Number of landholder's participating in MULTISAR HCS	1	3	7
Approximate number of acres involved	62,000	62,200	180,000

3.6 Achievements

MULTISAR inventories on participating lands in 2006 identified several key features including 10 sharp-tailed grouse leks, 1 active sage grouse lek, 10 ferruginous hawk nests, and 9 active burrowing owl burrows. MULTISAR also established 63 permanent transects and completed 124 range health assessments for long-term monitoring. Detailed wildlife and habitat information are contained within individual Habitat Conservation Strategies for participating ranches. Currently MULTISAR has three completed Habitat Conservation Strategies and four others underway.

4.0 MULTISAR EXTENSION PROGRAM

In 2007, MULTISAR will expand once more due to increased public interest and will provide an extension program to landholders across the grasslands (Figure 4). This program will promote stewardship of species at risk and natural habitats. The "*At Home on the Range*" guide and fact sheets relating to beneficial management practices for species at risk will be provided to landowners in priority areas. A "*Rapid Assessment Process*" will be developed and used on priority land to provided guidance on use of BMP's. A MULTISAR Extension Services Coordinator will be hired in spring 2007 to guide this program.

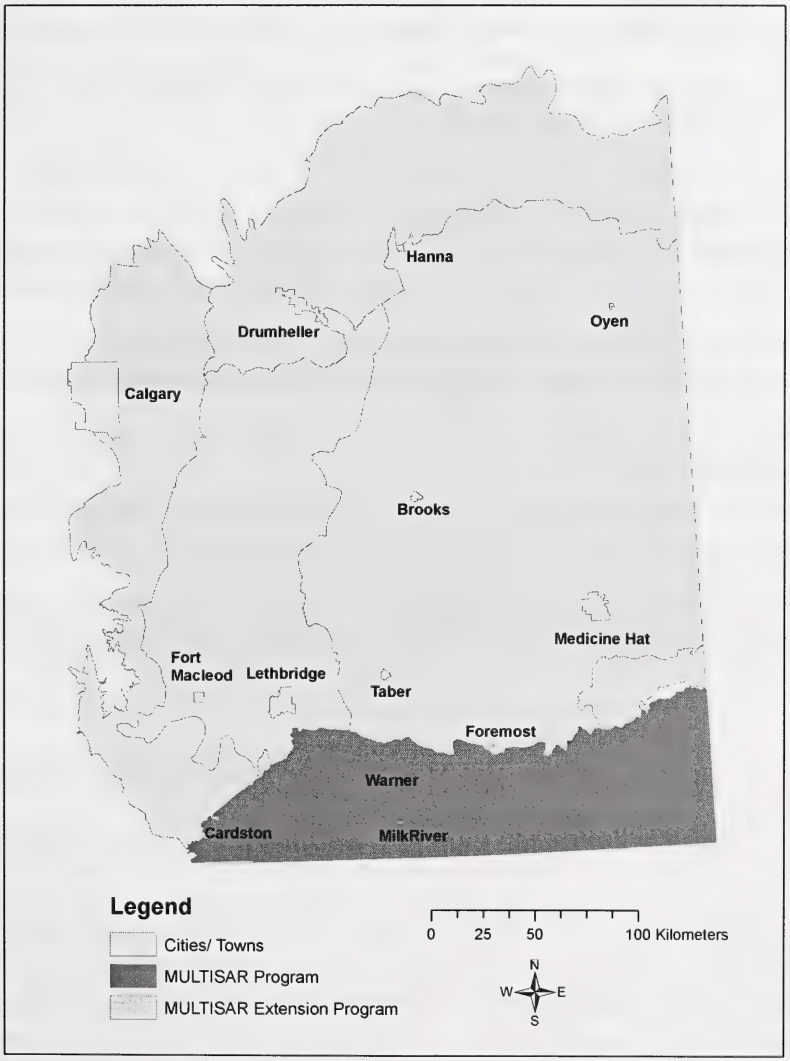

Figure 4. MULTISAR Extension Program Area

5.0 FUTURE DIRECTION: 2007-2009

During 2007-2009 the MULTISAR team will focus on the MULTISAR conservation program and the MULTISAR extension program in order to achieve long-term goals. The following are a list of activities that MULTISAR will be undertaking over the next few years.

- Addition of an Information/Education component "*At Home on the Range*" promoting the theme "*living with Alberta's Prairie Species at Risk*".
    - Distribution of "At Home on the Range: extension document through Government, Counties, and NGO's
    - Development and implementation of a MULTISAR "Extension Service" using a much less costly and less time-consuming process for providing area-specific SAR management advice to landholders throughout the Grassland Natural Region.
    - Refinement of the "Extension Service" process through trial use on selected properties in year 1, leading to completion of minimum 30 landholder consultation processes in year 2 using this new protocol.
- Collaboration with PFRA/AESA on Environmental Farm Plan compatibility.
- Advance species at risk conservation through collaboration with Alberta's Prairie Conservation Forum.
- An Index of Biotic Integrity will be developed for the Milk River.
- There will be an economic analysis done of the costs and benefits of implementing MULTISAR BMPs for species at risk.
- Methods of evaluating Natural Capital/Ecological Goods and Services in prairie habitats for species at risk will be explored.
- Analysis and reporting will be done on the effectiveness of MULTISAR in implementing Endangered and Threatened species recovery actions (as identified in provincial, national, and international recovery plans).
- HSI models and associated maps will be revised for the project area and the grassland region using more detailed habitat information becoming available through the completion of the Grassland Vegetation Inventory (GVI).
- MULTISAR BMPs will be amended using BMPs from the Agriculture Policy Framework BMP project.
- BMP Summary Brochures will be produced for Grassland Natural Region wildlife species.
- MULTISAR biologists will aid in the range assessment process in 2007 by collecting data on the three dominant grass species occurring at each site along transects and the utilization rate (heavy, medium, or light) by cattle. This grid pattern will increase the efficiency of the range inventories by providing agrologists with up to date information on grass communities existing on the ranch so that they will be able to plan transects prior to entering into the field.

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7.0 PERSONAL COMMUNICATIONS

Uchikura, M. Riparian Resource Technician, Alberta Riparian Habitat Management Program, Lethbridge, AB.

APPENDIX A

LETTER OF INTENT TO PARTICIPATE IN THE MULTISAR STEWARDSHIP PROGRAM

Ranch:_____ Size(acres):_____ Home quarter: 1/4____ Sec___ Twp___Rge____
(Please attach map of ranch)
This letter is to set forth the intended partnership between (landholder(s))
_____and the MULTISAR stewardship program (represented by Alberta Conservation Association (ACA) and Alberta Sustainable Resource Development (ASRD) to implement a stewardship program on _____(ranch)

Within this partnership the following tasks will be completed by the MULTISAR project for _____ranch.

- ❑ Complete a full habitat assessment.
- ❑ Complete a full wildlife inventory.
- ❑ Results of inventories will be put in the Alberta Government's Fish and Wildlife Management Information System (FWMIS) with appropriate buffers for Species at Risk.
- ❑ Provide information on habitat requirements of Species at Risk.
- ❑ Provide species historical information for the above ranch from FWMIS.
- ❑ Participate as a member of a Habitat Conservation Strategy team to develop a Habitat Conservation strategy for the above ranch.
- ❑ Assist with the implementation of any habitat improvements as outlined in the Habitat Conservation Strategy (pending funding availability).
- ❑ Assist in the developments of small improvement projects depending on funding.
- ❑ Sign a habitat improvement agreement outlining the roles and responsibilities of each partner prior to the onset of completing improvements.
- ❑ Sign a Stewardship Commitment, which is mutually agreed to by all parties.

Within this partnership the following tasks will be completed by the landholder(s)_____.

- ❑ Allow the MULTISAR project and/or consultants reasonable access to the above ranch for the purposes of habitat and wildlife inventories.
- ❑ Allow reasonable public access requests.
- ❑ Participate as a member of a Habitat Conservation Strategy team to develop a Habitat Conservation Strategy for the above ranch.
- ❑ Within the framework of the Habitat Conservation Strategy team, assist in the implementation of a Habitat Conservation Strategy.
- ❑ Assist with the implementation of any habitat improvements identified in the Habitat Conservation Strategy (funding availability).
- ❑ Work with the MULTISAR team on small improvements, which show measurable benefits to species at risk.
- ❑ Sign a habitat improvement agreement outlining the roles and responsibilities of each partner prior to the onset of improvements.
- ❑ Follow recommendation outlined in the Habitat Conservation Strategy.
- ❑ Display a recognition sign at a visible site.
- ❑ Allow the project to be used as a demonstration site.
- ❑ Sign a Stewardship Commitment, which is mutually agreeable to by all parties.

Landholder_____ Date:_____

SRD-FW_____ Date:_____

SRD- Lands_____ Date:_____

ACA_____ Date:_____

Alberta SUSTAINABLE RESOURCE DEVELOPMENT Public Lands & Forests

Alberta Conservation Association Conservation Through Collaboration

Alberta SUSTAINABLE RESOURCE DEVELOPMENT Fish & Wildlife

APPENDIX B
STEWARDSHIP COMMITMENT

The XXX Ranch MULTISAR Plan represents a collaborative effort involving the landholder, Alberta Conservation Association, Alberta Sustainable Resource Development, and other partners. The plan uses detailed wildlife and range evaluations to provide a multi-species management plan for application at the full ranch level (private and public land). Range and wildlife priorities have been determined for individual pastures. MULTISAR Beneficial Management Practices were used to develop specific management recommendations for priority management species and their habitats.

This MULTISAR Plan provides the rancher with information and guidance to incorporate species at risk into his ranching operation. It provides resource management agencies with the information needed to effectively manage for wildlife and range in an important part of their jurisdiction. The MULTISAR Plan provides the primary conservation partner, Alberta Conservation Association, with the baseline information needed for ongoing monitoring. This monitoring is important in determining the success of the MULTISAR Plan in achieving habitat goals.

A MULTISAR plan is the culmination of a voluntary cooperative process involving three key partners (landholder, government agency, and conservation partner), and several other consultants and individuals. A landholder (owner or lessee) who has a MULTISAR Plan has enjoyed the benefit of personal consultation sessions with resource experts, has received detailed range and wildlife information regarding his ranch and has participated in decision-making towards management of crown land resources on his land.

This Stewardship Commitment is the final stage in the MULTISAR process. It is a statement of commitment to implement the MULTISAR Plan for five years. It represents a joint declaration of confidence that this MULTISAR Plan will be beneficial to all parties. It ratifies the need for ongoing consultation, including annual meetings, and a commitment towards adaptive management to ensure the plan remains effective. It endorses a 5-year review to revise and renew the XXX Ranch MULTISAR Plan.

STEWARDSHIP COMMITMENT STATEMENT

The signatories agree to implement the MULTISAR Plan on the private and public lands of the XXX Ranch for 5 years from XXXXXX to XXXXXX.

Representative of the XXX Ranch:

_____

Representative of Alberta Conservation Association:

_____

Representative of Alberta Sustainable Resource Development:

_____

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